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Study to focus on uses for chat

State agency hires university for project

By Gary Garton
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MIAMI, Okla. - The Oklahoma Department of Environmental Quality signed a contract this week with the University of Oklahoma to perform a two-year study on the safe use of lead-contaminated chat in paving asphalt.

An estimated 75 million tons of the high-lead-content mine tailings remain in the Tar Creek Superfund site, contributing to continued airborne spreading of lead particles.

While the legal bans on removing much of the chat have been lifted, a debate continues on how to use the mine waste to avoid future environmental contamination.

Scott Thompson, director of the state agency's Land Protection Division, said in a news release Wednesday: "We know that encapsulation of the chat is the best way to stop exposure to the lead. If we can determine that raw chat can safely be used in asphalt, even over time as it weathers and is reworked, then we greatly increase the rate of chat use."

Over the past two decades, the Tar Creek Superfund site in Ottawa County has been the focus of a nearly $100 million cleanup by the federal Environmental Protection Agency.

The area was contaminated by waste from decades of lead and zinc mining. Most of that waste is a gravel called chat. The chat mountains that dot the area were created by the milling of flint, or chert, rock to extract the lead and zinc.

The chat has commonly been used as a road-building material, for railroad ballast and in asphalt-paving applications. But, it also has been used for driveways and on playgrounds. It is the latter uses that pose the greatest health threats, officials say, in that driveways and playgrounds are used by children at play.

Tests in the area, and the whole of what was the Tri-State Mining District in Oklahoma, Missouri and Kansas, have revealed high levels of lead in children's blood. Reducing those levels has been the goal of the cleanup for years.

Michael Dean, media spokesman for the state agency, said in a telephone interview Wednesday that the OU study will cost an estimated $200,000. Another study, being funded by the Oklahoma Department of Transportation at Oklahoma State University at Stillwater, will study the possible use of chat as a subgrade material in local and interstate highways.

Steve Thompson, new executive director of the Department of Environmental Quality, said the studies "should provide us answers in two years about the long-term safety of chat in asphalt, and we will be in a great position to expedite its safe and economic use."

The new contract is one of the projects being financed with $4 million the state Oklahoma is providing as matching funds for what is to be a total of $35 million in federal and state money for a continued cleanup in the Tar Creek site.

Dean, the publicist, said the state money also could be used for:

• Continued cleanup of yards at owner-occupied homes with small children or, if economically more feasible, purchasing such homes and demolishing them.

• Pay for an individual to screen owner-occupied homes for lead-paint problems, to suggest cleanup measures and to administer the use of the $200,000 in hardship cases.

• Payment of up to $2,000 in damages to homeowners who have valid claims of damage to their property from previous cleanup work.

• The Oklahoma Conservation Commission to allow reclamation of barren areas affected by former mining activities, including the closure of improperly sealed mine shafts and filling mining holes.

• Possible matching funds of up to $300,000 to build a rail spur into the area for chat removal.

• Payment to the Department of Environmental Quality to develop and administer the contracts and interagency agreements between federal and state projects.

The state matching funds were approved in the final days of the last legislative session and have been signed by Gov. Frank Keating.